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# RCEME Journal

THE MAGAZINE OF THE CORPS OF  
ROYAL CANADIAN ELECTRICAL AND MECHANICAL ENGINEERS  
1-2015

## Training

EX RAFALE BLANCHE

On-the-Job Training Centers  
in Edmonton and Gagetown

Training Evolution

*Also in this edition:*

*Caseless Ammunition?*

*Setting the RCEME Standard*

*The Extraordinary Story of Harry Lovelace*



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Defence

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and Technical Excellence





## Training



- 7** A Leopard Can't Change its Spots - But Maintainers Can
- 8** EX RAFALE BLANCHE
- 9** Training Evolution
- 10** 3 Cdn Div OJT Center Finalization Evaluation
- 11** OJT Center in Gagetown
- 12** Reserve Training: Maintenance Support in Toronto
- 13** An Out-of-the-Ordinary Assignment to 202 Workshop Depot

## REGIMENTAL COMMAND

- 4** The Cornerstone of our Success
- 5** Respected and Renowned Training
- 6** RCEME Colonel Commandant's Message

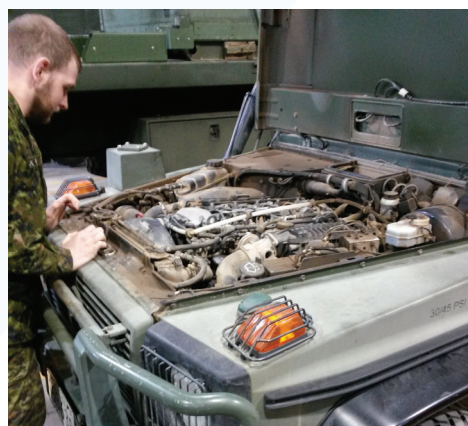


## WHAT'S UP?

- 14** Lucas Oil Sportsman Cup : RCEME Technicians at Play for Ill/Inured CAF Members
- 16** The Ironman of RCEME Members of 3 RCR
- 17** 13<sup>th</sup> Annual Warrant Officer J.R. Muise Memorial Hockey Tournament
- 18** Operation Lutin Blindé - Helping Santa Claus in the Style of the Army Equipment Fielding Centre

## TRADE SECTION

- 19** Vehicle Technician: Message from OA and AOA



- 20** Electronic Optronics Technician: Update on the new Developmental Period 1
- 21** Materials Technician: Tons of projects for the Mat Techs of 1 Svc Bn!
- 22** Weapons Technician: Falling to the Level of our Training
- 23** Ammunition Engineer: Caseless Ammunition?

## TRADITION AND HISTORY

- 24** Setting the RCEME Standard



- 25** Base Maintenance CFB Borden assists the City of Barrie to Maintain Local Heritage

## MEMBER PORTRAIT

- 26** A RCEME Soldier's Story: PCA's War
- 27** The Extraordinary Story of Harry Lovelace
- 28** Another Historical Find

## AWARDS AND RECOGNITION

- 30** Knight of the French National Order of the Legion of Honour
- 31** Director RCEME's Coin of Excellence



## COLUMNS

- 32** Last Call





## Director's RCEME Message

## The Cornerstone of our Success

Col K.J. Hamilton, Director RCEME

*As Director RCEME, I often talk about our past; connecting the successes we have had, to the strong and capable Corps that we are today. While the past is something in which we must always take pride, in leading the Corps of RCEME, my focus remains squarely on the future; ensuring that our strategic direction is relevant and that our plans to get there are sustainable. The key to our future is the training we provide to our Craftsmen and RCEME*

*Officers. From the fundamentals of training Developmental Period (DP) One, which enables success on initial postings to advanced training, which sustains that success across an entire career, training is the cornerstone of our success and the topic on which this edition of the RCEME Journal is focused.*

Centered on the RCEME School, the current training program that we deliver to both Officers and NCMs is one of extremely high quality. With a strong foundation built on operational focus and technical competence, we prepare our Craftsmen and Lieutenants exceptionally well for the challenges they will face on leaving the school. Our On-Job-Training (OJT) Program, a collaborative effort between the RCEME School and the field force, is widely seen by the Canadian Army as a huge success and a model to be emulated by other Corps. Improvements in technology now enable the RCEME School to use Monitor Mass to track individual student progress on a real-time basis, helping to ensure we meet the 24-month target for OJT. Equipment acquisition successes have demanded constant evolution in training and the school has responded. 2014 saw the introduction LAV 6.0 into core training for all NCM MOSID's, the introduction of a modernized Engineering Ground Support Equipment Course, the development of an internally delivered Sea-Container Inspector Course and, with the delivery of the ARV 3 to the RCEME School in December 2014, fully updated

Leopard 2 FOV training.

While the effectiveness of our training is unquestioned, in an environment of fiscal restraint, we must also be efficient. We need to deliver high quality training to the required standard using the fewest resources possible. With its coming move to a new state of the art training facility this Fall, the RCEME School is poised to move to a technologically enabled learning environment. Student issued laptop computers linked to wireless networks in classrooms and living quarters will help to create a student-centered learning environment. The use of the Defence Learning Network (DLN), currently limited to on-line training and assessments for DP 1 students, is being expanded to decrease residency requirements for advanced courses.

Despite our successes, we cannot afford complacency; we must constantly innovate if we are to continue to be successful. Our ability to be technological leaders in the Army of Tomorrow, whose operational concept is centered on technologically enabled Adaptive Dispersed Operations,

will rely increasingly on the effectiveness of the training we provide our officers and soldiers. For our technicians, I am committed to supporting the development of a sustainable, cost effective training strategy that emphasizes operational focus and technical and cognitive flexibility for which we are praised, while allowing for diverse training approaches in order to meet the training needs of four distinctly different military occupations. For our officers, we have work to do to ensure that the training meets the needs of the CAF, including the technical and engineering competence at the tactical level and advanced project management competency skills to support equipment acquisition at the strategic level.

The unparalleled respect we have earned as a Corps, is due to the operational and technical excellence consistently demonstrated by our technicians and officers. That excellence is due to the strength of our training and the reason why our training will be the cornerstone of our future success as a Corps.

## Editorial Team

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## The Journal of The Corps of RCEME

|                             |                                                        |
|-----------------------------|--------------------------------------------------------|
| <b>Corps Formation</b>      | May 15, 1944                                           |
| <b>Corps Motto</b>          | Arte et Marte                                          |
| <b>Corps Patron Saint</b>   | Saint Jean de Brébeuf                                  |
| <b>Corps Colonel Cmdt</b>   | Col (ret'd) A. Nellestyn, OStJ, PhD,<br>BEng, PEng, CD |
| <b>Corps Director</b>       | Col K.J. Hamilton, CD                                  |
| <b>Corps Sergeant Major</b> | CWO J.G.R. Gilbert, MMM, CD                            |





## RCEME Corps Sergeant Major's Message

## Respected and Renowned Training

CWO J.G.R. Gilbert, RCEME Corps Sergeant Major

***2015 will bring with it much work and many challenges to overcome. As we all know, the equipment we are tasked with supporting for the CAF requires a great deal of expertise on the part of our technicians in the four technical trades of the RCEME Corps.***

To acquire this technical expertise, we all began at our Centre of Excellence, our home station, either the Royal Canadian Electrical and Mechanical Engineers School at Borden or the former Technical School at St-Jean-sur-le-Richelieu (where some of the most “experienced” among us went) to acquire the basic knowledge of the profession. Through exceptional leadership and unparalleled dedication, our school at CFB Borden produces several hundred technicians each year, most of whom will continue their careers and development at one of the four training centres (Edmonton, Petawawa, Valcartier or Gagetown) for a period of 24 months.

Our training centres are respected and renowned within the CAF. We are often recognized as an example for other Corps and Branches when it comes to training. We have established an excellent system for producing highly qualified technicians in a very short time, with very diverse programs, in order to continue to keep all equipment operational. We are constantly being challenged to maintain some qualifications on both old and new equipment. While we are far from perfect, we have the best training system in the

CAF. Members of the RCEME Corps are very highly respected within the CAF because of the knowledge and skills they have acquired during their careers as soldiers and technicians. Remember, we are soldiers first and technicians always. By skill and by fighting.



**Col Cmdt Change of Appointment at CFB Petawawa on 24 Oct 2014. From left to right: LCol Harding, Col (ret'd) Nellestyn, CWO German, BGen Kennedy, CWO Gilbert, CWO Dubuc, and BGen (ret'd) Holt.**

Since I became your RCEME Corps SM, I have had the opportunity to visit many of you, and I am extremely proud of everything you do to keep our equipment operational. You always find a way to solve any problem. You are often magicians when you open your toolboxes. Wherever

you are, I thank you for the excellent work you do as you juggle multiple priorities at once to meet the needs of our client, the CAF.

On October 24, 2014, in Petawawa, the RCEME Corps presented a departure certificate to BGen (ret'd) Peter Holt, and held a great parade. I would like to take the opportunity to thank him for all he has done for the Corps during his six years as Colonel Commandant of the RCEME Corps. General, you have been an excellent ambassador for us all. Thank you, and continue to be a part of our big family. I would also like to welcome his successor, Col (ret'd) Andrew Nellestyn. Colonel, welcome, and congratulations on your appointment. I am certain that all of us will continue to provide solid support to the new Colonel Commandant of the Corps.

In conclusion, remember that good technical education and leadership will help you position yourself effectively to fill important positions. Thank you very much, and continue to do what you do well to ensure that the RCEME Corps remains the best within the CAF. Arte et Marte.

Call for Articles, 2<sup>nd</sup> Edition 2015**THEME FOR NEXT EDITION : RECOVERY TO SUPPORT LAND OPERATIONS 2021**

We invite you to send your articles and photos relating to the above mentioned theme or categories (maximum of 500 words). Please send your photos in a distinct JPEG file format rather than directly in the “MS Word” document used for the text. **THE PHOTOS MUST BE AT LEAST 300 DPI (dot per inch), and 5”x7” of size or more to qualify for the cover page. The author of the article and people portrayed in the photos must be identified at the end of the article as follows: Rank, initials, last name, trade and unit. DEADLINE FOR SUBMITTING YOUR ARTICLE IS JULY 13, 2015.** We reserve the right to select articles and to modify the texts according to the space available.

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## RCEME Colonel commandant's Message

Col (ret'd) Andrew Nellestyn, RCEME Colonel Commandant

***My appointment as your Colonel Commandant is an honour and constitutes the highlight of my career. I will endeavour my utmost to represent the Corps and you in the commendable manner that BGen (ret'd) Peter Holt did so ably, effectively and energetically during the six years he served as Colonel Commandant. We all owe him a hearty vote of thanks.***

The Change of Appointment ceremonies took place 24 October 2014 in the 2 Svc Bn Maintenance Company lines. It was a most impressive event involving representatives of all the Battalion's companies and HQ. The location was aptly chosen and brought back great memories as both Peter and I served in the Battalion in our formative years. For me it was like closing the loop, coming around full circle and a homecoming, as this was my first posting as a platoon commander and then, subsequently, as the Bn CO.

The Corps' history is one of outstanding service due in large measure to the dedication, professionalism and skill of those who served and those who continue to carry the flag at home and abroad. Our heritage is a proud one and much applauded by those who depend on the Corps to maintain operational readiness and effective responsiveness in combat theatres and humanitarian missions.

As we look back on 2014 we can truly be pleased with our efforts be these in Afghanistan where the Corps distinguished itself or elsewhere in Canada and other out-of-country deployments.

The Corps also participated in the launch of the book *Afghanistan: A Canadian Story 2001-2014* ([www.afghanistancanadianstory.ca](http://www.afghanistancanadianstory.ca)) which was held at the Cartier Square Drill Hall in Ottawa on 4 November 2014. This proved to be a well-attended gala affair with a considerable RCEME contingent present. The book, in coffee-table format, is a legacy album containing personal anecdotes and photos by men and women who served in Afghanistan. RCEME and the KAF NSE feature prominently in the book. Indeed, this publication would not have been possible without the Corps' support. The proceeds of the sale of the book will be donated to organizations dedicated to the support and care of those in need who served in theatre including their families. Over 3,000 copies have been sold to date thus placing the book on the best sellers list. It can be purchased online from Indigo Chapters.

Many exciting and noteworthy events await us as we embark upon the New Year: planning for the 75<sup>th</sup> Anniversary which is now well in hand; the move towards the



***Photo of RCEME Museum Phase I sod turning ceremony CFB Kingston 17 June 2014. The people holding the shovel are BGen (Retd) Pep Fraser (Chair CELE Museum Foundation) and Col (Retd) Andrew Nellestyn (RCEME).***

merger of the associations into one all-ranks entity thereby creating a truly unified RCEME family; and the opening of Phase I of the RCEME Museum at CFB Kingston beginning of 2016 are but a few examples.

During the course of 2015 I will be traveling across the country to meet with you, to share good times and stories and to hear of your thoughts on the Corps, events and other matters of import to you. I very much look forward to these visits for it is only by meeting you first-hand that I will be able to best serve the Corps and you as your Colonel Commandant.

***RCEME contingent which attended the launch of the book *Afghanistan: A Canadian Story 2001-2014* which was held at the Cartier Square Drill Hall in Ottawa on 4 November 2014.***





# A Leopard Can't Change Its Spots – But Maintainers Can

Cpl T. M. Sheppard, Veh Tech, C Sqn, RCD

**2014 was likely the most challenging year for C Squadron, The Royal Canadian Dragoons (C Sqn, RCD) since the unit stood up in July 2012. The Sqn completed an incredible amount of training over the year – including two large scale exercises: EX MAPLE RESOLVE 1401 and EX COMMON GROUND II.**

In early May, C Sqn deployed to CFB Wainwright to participate in EX MAPLE RESOLVE 1401. It was our first exercise with the Leopard II platform, and it was quite a learning experience to say the least. Attempting to support a complete tank Sqn along with a full echelon with minimal parts, tooling, and a shortage of qualified technicians was a daunting task – but was a critical component of 4<sup>th</sup> Canadian Division maintaining a state of high readiness for the 2014 – 2015 year.

Prior to deployment, the C Squadron reviewed their tactics, as well as the technical aspects of modern warfare. One particular benefit to Maintenance Troop was a review of the running replenishment (RR) procedure. While reviewing the RR drills, the Squadron Sergeant Major (SSM) asked why the maintenance WO would normally stay with him during the operation – to which Cpl Sheppard quickly responded “so the SSM can keep him safe, sir!” This became the running joke of the entire exercise.



From left to right: WO Slocum, MCpl Healey, Cpl Hancock, Cpl Sheppard, Cfn Lavoie, Cfn Carriere, Cpl Perrault, Cpl Beaumont, Cpl Perron, MCpl McLellan, Cpl Astor-Perrin

Upon completion of EX MAPLE RESOLVE, followed by a well-deserved summer block leave, C Sqn began ramping up for the Combat Team Commander Course and EX COMMON GROUND II. Using our many lessons learned from Wainwright coupled with the hard work of our Tech Sgt and SPSS section, a reserve of fast-moving parts was developed so as to facilitate speedy repairs in the future.

The remainder of our Leopard II specialty tooling began to arrive, and the long list of vehicle and turret faults from EX MAPLE RESOLVE was whittled down to a more manageable level.

On 10 Nov 2014, C Sqn deployed to the much more familiar Gagetown training area to take on the challenge of EX COMMON GROUND II. Being familiar with the training area made a big difference to the tank crews – the drivers in particular. While deployed with 10 tanks and an echelon, maintenance Troop made a steady draw on the supply of miracles to maintain an almost perfect zero VOR. While deployed on EX COMMON GROUND II, C Sqn gathered with elements from 1 Combat Engineer Regiment and the Royal Canadian Armour Corps School for a Remembrance Day ceremony at Worthington Tank Park to pay our respects to the fallen.

All in all, the last year brought real meaning to the catchphrase “it’s a great day to be a Dragoon”, but I still prefer our own motto... “Arte et Marte”.



MCpl Healey and Cpl Hancock



# EX RAFALE BLANCHE

Lt Anthony Bigonnesse, Veh Pl A/Comd, 5 Svc Bn

**5 Service Battalion Maintenance Company (5 Svc Bn Maint Coy) recently participated in EX RAFALE BLANCHE, from 19 to 27 January 2015 in the Valcartier training areas. The Maint Coy had to train intensively in preparation for its final training, EX MAPLE RESOLVE, which will take place Wainwright from April to June 2015.**

The concept of brigade support area (BSA) was practiced: 5 Svc Bn was responsible for coordinating its own defence in the rear area, which was also occupied by other units of 5<sup>th</sup> Canadian Mechanized Brigade



5 Svc Bn Maintenance Company

Group (5 CBMG). A quick reaction force was formed and had to respond directly to all commands from the headquarters and services company in charge of defending the BSA. The tracked towing vehicle (MTVR) of the maintenance company was actively involved in defending the camp, along with the two armoured wheeled towing vehicles (Bison MRV), 5 Svc Bn's only type A resource.

The Maint Coy had to first produce an effective towing plan in preparation for the Brigade's road move, which took place over more than 24 hours and involved over 750

vehicles. An equipment collection point (ECP) led by the Maint Coy was deployed towards the front in order to minimize the lines of communication between vehicles that might need towing/repair and the Brigade's release point. The road move was successful, thanks to the support of the ECP, which was relatively busy responding to numerous calls for towing, given the changing weather conditions in the region.

During the exercise, the towing section was very busy, responding to over 30 calls. The Maint Coy was also able to change the engine of a Coyote vehicle from 12<sup>e</sup> Régiment blindé du Canada. The operation took place in their field garage, where vehicle technicians worked in shifts for over 24 hours straight to complete this priority task. In addition to maintenance tasks, the company was actively involved in defending the BSA, in particular defending its area of responsibility, operating various

observation posts and supporting the Battalion with its three armoured C6 machine gun carriers.

At mid-exercise, 5 Svc Bn generated a forward logistics group (FLG) to minimize the lines of communication between the units in combat and the BSA to ensure better

forward support. The Maint Coy played an active part in the FLG by commanding the advance guard convoy, which was escorted by two Griffon helicopters from 403 Tactical Helicopter Squadron. Upon arrival on site, the FLG was co-located with a 5 Field Ambulance Detachment, which had set up an ambulatory tent to practice numerous scenarios involving mass arrivals of casualties by air or land. In the evening, a helicopter arrived on site and those in Maint Coy involved in the FLG took part in the simulation by first assisting the helicopter to land in the dark, then helping members of 5 Field Ambulance load the wounded onto the helicopter. Several members of Maint Coy had to use their advanced first-aid training to stabilize the simulated casualties before loading them onto the aircraft.

Before redeploying the FLG, a small detachment headed for the municipality of Sainte-Catherine-de-la-Jacques-Cartier to participate in a community outreach activity. The event allowed Valcartier members to interact with the local community and members of the Maint Coy to present the various vehicles they used during the exercise, such as: the



Vehicle technicians changing the engine of a Coyote



wheeled armoured maintenance recovery vehicle (a Bison MRV), the heavy mobile repair vehicle (HMRT) and the tractor-trailer with platform and winch (Tru-Hitch). Maint Coy also took the opportunity to present its newly acquired heavy armoured support vehicle (the AHSVS Wrecker). The community was very impressed with the imposing vehicle, which was used primarily in Afghanistan.

To conclude, the maintenance company learned a great deal during the exercise by working with other units, such as the 5 Military Police Regiment and



**AHSVS Wrecker presented to the Commander, 5 Canadian Mechanized Brigade Group, Colonel Dany Fortin, during a community outreach activity.**

5 Field Ambulance, as well as with 5 Svc Bn. The exercise involved numerous challenges, such as ensuring sufficient equipment supply, providing effective second-line maintenance support, supporting a road move involving over 750 vehicles, and ensuring the company's own defence, among many others. All of these challenges were successfully met, and the 5 Svc Bn Maint Coy is ready to face more of them during EX MAPLE RESOLVE 15 in the spring.

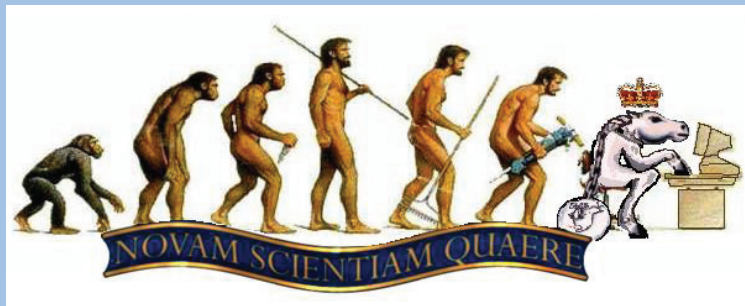
# Training Evolution

2Lt Patrick Nadeau, Assistant Adjutant, RCEME School

**Royal Canadian Electrical and Mechanical Engineers' (RCEME) NCM occupation training during Developmental Period One (DP1) is conducted at the RCEME School located at Canadian Forces Base Borden, heavily supported by On the Job Training (OJT) Centres located within the four Canadian Divisions. Tracking RCEME students' progress throughout DP1 is critical for a number of reasons and with the number of Apprentices graduating each year exceeding 350, it's no surprise it can get a little complicated.**

Inaccurate tracking of student progress on OJT could negatively impact the ability to schedule and load courses efficiently. As well, a centralized tracking system that provides instant real-time information on student progress helps to reduce the likelihood that students will spend longer than the prescribed 24 months on OJT. A more modern and efficient means was required to track student progression throughout DP1.

RCEME School personnel have been involved in developing an online and real time program to address the gaps in student tracking inherent in the paper-based On-Job Progress Report (OJPR) system. The result was the creation of the Apprentice Information Monitoring System (AIMS); the modernization of the



Apprenticeship program by transferring the information in the hardcopy paper system to an integrated electronic one. The OJT progress report was electronically uploaded in the Military Employment Management System (MEMS) and the evaluations were created in the Defense Learning Network (DLN) which enabled testing to be administered remotely. After trials and testing, all parties are now trained in these applications and the system is live within the Monitor Mass Training Tracker. This assists in individual monitoring which

can help identify strengths and weaknesses in both a student and their training program. This system is also helping to identify average training time by trade across OJT Centers and further facilitating the exchange of best practices.

RCEME training is the foundation of the success of the Corps of RCEME. The partnership between the RCEME School and the OJT Centers is acknowledged as a model of success across the Canadian Army and the Canadian Armed Forces. The AIMS system will strengthen this model as it facilitates information flow between the RCEME School and the OJT Centers, improves the ability of the School and the Corps to monitor OJT throughput and creates further synergy into an already impressive training program.



## 3 Cdn Div OJT Centre Finalization Evaluation

Sgt B.R. Lahey, Vehicle Technician, OJT Centre, Maint Coy, 1 Svc Bn

***Vehicle Technician (Veh Tech) OJT confirmation in Edmonton is a week-long training program and it takes place prior to members being loaded onto their Developmental Period 2 (DP2) in Borden.***

Every time a Veh Tech DP1 course is completed at the RCME School, the Western Area OJT Centre regularly obtains a number of new soldiers. Within a couple of days of arriving at Western Area OJT Center and after allowing time for orientation and personal admin, the Craftsmen are assigned to a section within the OJT Center where they begin their journey towards the completion of Veh Tech DP1.2. This program lasts 24 months, though this time frame is the desired average and acts as a guideline to ensure student continuity within centres across the CAF.

### Final Evaluation

When an Apprentice achieves 75-80% completion in their on-job performance record (OJPR), their section commander initiates the testing process with Standards. When all 11 Defence learning network performance objective (DLN PO) checks have been successfully completed, the soldier's name is forwarded to the senior technical instructor (STI) for posting. With the collective efforts of the OJT Centre, career managers and the soldier's new home unit, candidates are course loaded on the next available DP2 course.

Approximately one month prior to

commencement of DP2, the Apprentices from all over Western Area (ie. Edmonton, Shilo, and Wainwright) are called to



***RCME students diagnosing faults in the simulators.***

the OJT Centre, 1 Svc Bn to complete simulator and Military skills training. This training lasts for one week and it is always from Mon to Fri, which helps to ease the budget strain as soldiers throughout the area travel to the centre.

### The Simulator Board Room

The simulators consist of various vehicle systems that helps confirm Craftsmen diagnostic skills in a safe, clean, and controlled classroom setting. Soldiers are also exposed to a wealth of diagnostic

the vehicle system simulators allow the instructors to work one on one with a number of techs by monitoring and interacting with each individual, both personally and through the simulation control centre, which is located in the simulator room.

This sort of vehicle fault management and supervision can be compared to having one supervisor overseeing and interacting with an entire repair section in a normal workshop, all at the same time. While monitoring the simulator program, the instructor can easily

focus on any weak areas a soldier may be encountering, and quickly make the necessary adjustments needed to ensure success. DP2 qualification allows a RCME soldier to function as a Mobile repair team (MRT) Commander. Thus, during this final week, the MRT Skills and drills are presented and discussed, including such things as: Orders (Receiving/Issuing), Battle procedures, MRT Drills, Reports and Returns, concepts of recovery, and navigation.

The mission of the RCME OJT is to produce highly trained and qualified technicians in order to support

CAF needs. This final week of evaluation and training sets our students for a great success on achieving that mission.

*Soldiers are also exposed to a wealth of diagnostic test equipment and can be challenged by centrally controlled and real time fault insertion.*

test equipment and can be challenged by centrally controlled and real time fault insertion. While diagnostic skill is the key goal for today's Veh Tech apprentices,

# OJT Center in Gagetown

Cpl J.R. Hill, OJT Weapons Technician

***Gagetown's RCEME On-the-Job-Training (OJT) Center exemplifies the highest standards of apprenticeship training for the next generation of skilled RCEME Technicians. The experiences gained here are unique to those of the rest of Canada, as 5 CDSB Gagetown contains a sampling of virtually every piece of kit likely to come across the workbench of an aspiring technician.***

"Our goal at the Gagetown RCEME OJT Center is to manage the On-the-Job-Training for all RCEME Technicians posted to 5CDSB Gagetown by providing real world experience on the workshop floor and in the field maintaining all of the Army's equipment", sums up MWO SL Sullivan, OJT Center Senior Technical Instructor.



***Cfn White (Veh Tech) is explaining to his peers how the OJT hydraulic board is working.***

At any given time, there are approximately 100 RCEME OJT Technicians embedded within various 1<sup>st</sup> and 2<sup>nd</sup> line Maintenance detachments throughout Gagetown on a rotational basis. Under the supervision and mentorship of senior technicians, RCEME OJT technicians gain a wide range of experiences and exposure to kit

unique to Gagetown. This is largely to do with the nature of the units lodged here, such as 2 RCR, 4 ESR, 4 Arty Regt (GS), C Sqn RCD, as well as the various schools of the Combat Training Center (CTC). While on OJT, the technicians will be expected to work on nearly every piece of major equipment within the Canadian Army, including the newest vehicles and systems such as Leopard 2 MBT, M777, EOD robots, C16 CASW, and the LAV 6.0.

Throughout rotations with various units, candidates will be given the opportunity to soldier and gain firsthand experience with field conditions unique to first line operations. Aspiring technicians will have the opportunity to do their job in challenging, high speed and often austere conditions. The OJT Center itself organizes its own occasional training in weapons handling, navigation, first aid and IED recognition. In May 2015, the RCEME OJTs will compete in an 'ARTE et MARTE' skill at arms competition during the second annual Craftsman's Cup.

The training at Gagetown's OJT Center is second to none in the country and is exemplified in the quality of candidates sent onwards to their next phase of training to become fully qualified technicians. After 24 months, candidates are loaded on their DP2 and have an excellent record of academic achievement to show for it. The Gagetown OJT Center shows



***Cfn Rice (Veh Tech) is changing the hub oil on a Coyote.***

how apprenticeship training can be most effective in producing the next generation of technicians to support our troops and equipment in the Canadian Armed Forces.



***Mr Bay is teaching Cpl Mackenzie (Wpns Tech) how to fit a 9mm Browning slide.***



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## The electronic version of the RCEME Journal is available on the website!



# Reserve Training: Maintenance Support in Toronto

Cpl Berin MacNabb, Sgt Darrin Trudeau, 4 CDSB Petawawa Tech Svcs Det Toronto Maintenance

***The 4 Canadian Division Support Base (CDSB) Technical Services motto, *Fundamentum Subsidium*, reflects well Toronto Maintenance activities. From Latin, it means 'the foundation of support.'***

Maintenance support in the Toronto area is driven by a motivated group of 24 military and civilian defence team members. The military team is comprised of PRes (from 32 Service Battalion) alongside Regular Force members. The breadth and scope of the work provided by these members is unique and certainly provides a solid foundation for sustainment activities in the Toronto area.

4 CDSB Petawawa Tech Svcs Det Toronto Maint is unique as it is located in the largest city in Canada. Its Lodger Units range from Primary Reserve (PRes) Units from the Canadian Army, Royal Canadian Navy, VCDS and Medical element as well as recruiting centers and defense research organizations (DRDC, CFEME). It is also home to 32 Brigade Headquarters, Canada's largest most diverse PRes Brigade and 4<sup>th</sup> Canadian Division (4 Cdn Div) Headquarters. As part of the functional support base structure, Toronto Maintenance focuses its Land Equipment Management System (LEMS) towards a diversity of activity. This includes the busy and heavy production loads when PRes Units and other dependencies conduct intensive Collective as well as Individual Training activities in preparation for operational readiness for such events as the G20 Summit, Canadian National Exhibition and the upcoming Pan Am Games.

## Contribution to Reserve Training

There exists a number of synergies that occur between Tech Svcs Toronto Maint and the local Reserve Maint organization at 32 Svc Bn. Members of 32 Svc Bn augment the Toronto Maint strength but also conduct skills maintenance activities in Toronto Maint lines. This provides opportunities for professional development, especially



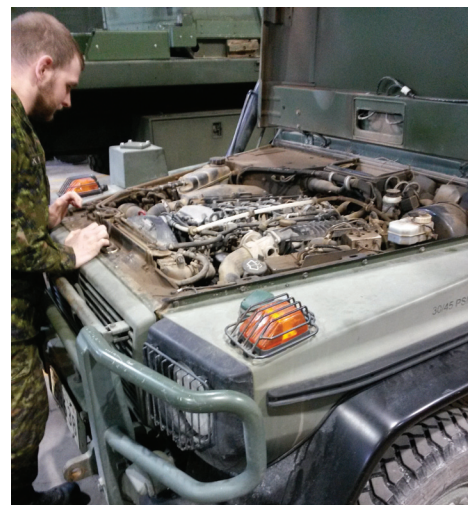
**MSVS Staging - onward to Meaford for Summer Training.**

in mentoring among the junior ranks. Additionally, Toronto Maint plays a significant role with 4 Cdn Div's annual Regional Summer Training (RST) program. RST concentration is the primary means for providing soldiers the leadership and trades training required to meet the demands of Force Generation (FG); it addresses individual training for Reserve soldiers across the Division.

Toronto acts as the LEMS lead for an annual Technical Assistance Visit's (TAV) Team to 4 Cdn Div Training Centre (4 Cdn Div TC) situated mainly in Meaford during these RSTs. It ensures equipment preparedness prior to and on completion of the Reserve training season. This includes Toronto RCEME Technicians as well as personnel who are force generated through CFTPO from across the 4 Cdn Div Area of Responsibility (AOR). The TAV, of 20 technicians, deploys forward to 4 Cdn Div TC Meaford to conduct inspection and repairs of the Divisions PRes equipment. This task includes managing the inflow and outflow of over 500 pieces of equipment including vehicles and ancillary equipment (including LMGs, GPMGs and Howitzers).

A subsequent TAV deploys to Meaford at the end of Summer to transition the equipment from RST back to the respective PRes Brigades to meet the time constraints between RST and the Reserve collecting training exercise. This past year, Exercise STALWART GUARDIAN 2014, conducted in the Welland-Niagara Peninsula, saw approximately 2000 soldiers deployed and conducting full-spectrum operations. Equipment that was inspected and repaired In-Situ during the RST TAVs allowed for maximum equipment availability for both Individual and Collective Training.

Toronto RCEME Technicians certainly have their hands full. Support to training is accomplished through a complementary working relationship between 4 CDSB Technical Services and 32 Svc Bn in Toronto and Reg and Res Force members. The shared experiences of both organizations and their members contributes to the success of LEMS activities in the area.



**MCpl Jonathan Ellis under the hood of LUVW.**

# An Out-of-the-Ordinary Assignment to 202 Workshop Depot

Lt Olivier Corneau, Project Development Officer, 202 WD, Montréal

***During the final stages of training at the RCEME School, we were given a brief presentation on the various assignments available for the RCEME O 2014 cohort. We were provided with an overall description of the positions offered and the working environment and tasks associated with them. The students then had to submit three choices of assignment. For my part, I included Montreal among my choices, having a general idea of the actual opportunities there for RCEMEs O. I was assigned to 202 Workshop Depot (202 WD) at Montreal Garrison in Fall 2014. What an interesting discovery I made there!***

Being assigned to a 3<sup>rd</sup> and 4<sup>th</sup> line maintenance organization, I expected the working environment to be quite different from that of a typical brigade position. I was nonetheless surprised at the numerous opportunities available at 202 WD for junior officers. It is an extremely complex workshop equipped with special tools, that works on projects supporting deployment operations, plays a key role in major repair and integration projects for armoured and logistics vehicles, and is responsible for repairing and refurbishing over 1,200 components. The production program is also supported by design, manufacturing, welding and machining resources.

To fulfill all of these mandates, 202 WD is subdivided into programs. This makes it possible for junior officers to work in a variety of areas, such as production, strategic planning, project management and development. The tasks associated with these various positions are usually engineering technology-related and include civilian and military personnel management. Junior officers therefore have the opportunity to produce new designs and assume full project management, from starting point to submission of deliverables.

Working at 202 WD also gives a good understanding of how the Land Equipment Program is managed, as it gives the opportunity to interact often with the clients, who are the DGLEPM equipment management teams (EMTs). This interaction with the various DGLEPM directorates offers valuable insight into the EMTs' reality and the roles and functions of each directorate. This knowledge is very useful for the rest of our careers, whether



***At 202 WD, junior officers have the opportunity to produce new designs and assume full project management, from starting point to submission of deliverables. In this photo, one project junior officers are working on: 360 degrees positioners for a Leopard 2 chassis.***

in an EMT in Ottawa or in a 1<sup>st</sup> and 2<sup>nd</sup> line maintenance organization.

In conclusion, an assignment as a junior officer with 202 WD is an opportunity

well worth taking for anyone interested in working in a technical field while also acquiring significant career knowledge and experience!



***2Lt Doucet-Hébert, Lt Corneau and Capt Noël from the Development Project Team.***



# Lucas Oil Sportsman Cup : RCEME Technicians at Play for Ill/Injured CAF Members

MCpl J.M. Schwemler, Materials Technician, 4 CDSB Tech Svcs det Toronto

***Motorsport has recently been used as an opportunity for recovery and therapy by wounded military personnel in a variety of countries around the world. A Toronto, Ontario based racing team founded by a RCEME technician intends to provide Soldier On / Sans Limites (SO/SL) members with opportunities to be involved with an endurance road racing program.***

Since 2013, Johnathan Schwemler Racecars (JSR) has been raising awareness for SO/SL, a Canadian Armed Forces (CAF) administered charity that provides recreational opportunities to chronically ill/injured, serving and former CAF members. This was accomplished by donating advertising space on their Lucas Oil Sportsman Cup (LOSC) stock-car to SO/SL and promoting the charity through videos, social media, car shows and motorsports events.

The LOSC stock-car program was born from MCpl Johnathan Schwemler's passion of racing. MCpl Schwemler and other RCEME-based volunteers use and enhance skills learned as RCEME technicians in the building, preparation and maintenance of the stock-car. Although some of the parts on the stock-car are production based, all of them have been modified for racing with weight and durability as a concern. Much of the car is custom built in-house (including fabrication/production of suspension parts suspension mounts, Lexan windows, vinyl lettering and components of the cooling, electrical, braking, fuel, intake and exhaust systems as well as modifications to the tubular chassis, driveline components and body), by/under the supervision of Mat Techs Cpl Will Schwemler, Base Maint, CFB Kingston and MCpl Johnathan Schwemler, 4

CDSB Tech Svcs det Toronto. They also perform sheet metal, fibreglass, painting and welding repairs throughout the season. The custom wiring harness for the electrical system and gauge panel was produced using lessons and advice provided by EO Tech MCpl Nathan Barbary, 3 RCR. Driveline maintenance is performed by former 4 CDSB Tech Svcs det Toronto, Veh Tech, Kyle Barnett, with assistance/advice provided by former RCEME School Veh Tech Instructor, Greg Schwemler. Paul DeJong (A-Shop/Components IC at 2 Svc Bn) has been a great mentor, relying on his previous experience as a team owner and driver in the same racing series (formerly known as CASCAR Sportsman). Many other RCEME technicians have provided assistance and advice that has helped shape the team and stock-car program over the years.



Rene Skrodzki, uBu Photography

***The team, from left to right: Colene Allen (PR), Darcy King (sponsor), Stephanie Schwemler (Merch), Tyler Watson (Spotter), MCpl Johnathan Schwemler (Driver/Mat Tech), Jason Metcalfe (Crew), MCpl (ret'd) Greg Schwemler (Crew/Veh Tech), Jerry Simmons (Crew) and Pte (ret'd) Kyle Barnett (Crew/Veh Tech). RCEME techs missing from photo: MCpl (ret'd) Beth Anderson (Hosp/Wpns Tech) and Cpl Will Schwemler (Crew/Mat Tech).***

With a strong representation of the Corps of RCEME and the Army within the team's structure, it didn't take long for the volunteers and crew members to develop a desire to "give back" to the military community. Late in 2013, one of JSR's civilian volunteers inspired the team to provide SO/SL members with an opportunity to drive and crew a real racing car after introducing JSR to a UK motorsports program (Race2Recovery). The Optima Batteries ChumpCar World Series (OBCWS) was considered as the best method of providing an economical, fun series to compete in, with the series' endurance road racing layout maximizing



***31 LOSC JSR/Soldier On 2014 Chevrolet Impala stock-car competing at Capital City Speedway near Ottawa, ON, July 5, 2014.***

Photograph – Thompson Photography



## What's up?

track time. The \$500 value assessment mandatory for all cars (if your car is valued more as determined by the series, you will be penalized with additional laps) provides an additional challenge that is well suited to skills developed by RCEME technicians. Each OBCWS team requires four to six drivers per event and all five of the 2015 events held in Canada are 14 hrs of racing spread over two days.

The intention of JSR's OBCWS program is to provide SO/SL mbrs with a unique recreational activity that fosters opportunities for recovery with elements (mission, teamwork, challenge) that relate to our experiences as soldiers. History has shown that racing teams develop social connections similar to sections that have spent time together in operational/training scenarios, and JSR believes that there would be a mental health benefit to SO/SL members participating in the program.

SO/SL has assisted JSR by advertising the program with great success; over thirty interested parties from across Canada have been in contact with JSR since its inception. We expect many



**JSR's 2001 Acura Integra for Soldier On / Sans Limites members as donated for entry in 2015 OBCWS Canadian events.**

**Photograph – Stephanie Schwemler**

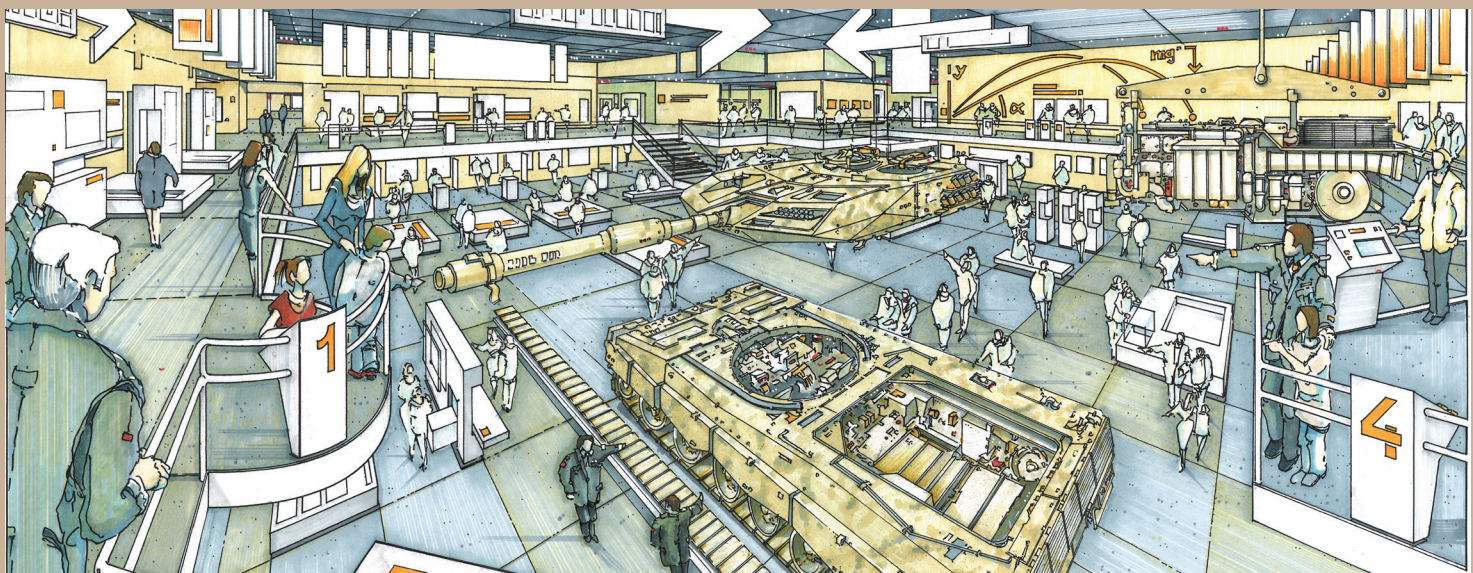
more as word spreads. Two cars and the approximately \$7,000 for registration fees have been generously donated to the program. The first OBCWS car will be built over the winter of 2014-2015 and will feature hand controls alongside the standard driving inputs to allow for more participants to become involved. The Canadian OBCWS events take place at Canadian Tire Motorsport Park (formerly Mosport), Calabogie Motorsports Park and Autodrome St-Eustache, and commence April 9<sup>th</sup>, 2015. The final event is considered a National Championship and

takes place on Thanksgiving weekend. Volunteers and sponsorship opportunities are always welcome as our goal is to provide this program to SO/SL members at no cost.

For more information on the program you can contact JSR directly ([info@jsracecars.com](mailto:info@jsracecars.com)) or follow along on the team's Facebook page ([www.facebook.com/JohnathanSchwemlerRacecars](http://www.facebook.com/JohnathanSchwemlerRacecars)).

## Did you know?

*The RCEME Museum, to be located at CFB Kingston, consists of two phases. Phase I, located in the expanded Communications and Electronics (C&E) Museum, will open in January 2016. Phase II is the RCEME stand-alone museum (concept drawing below) and will, along with the C&E Museum, form the anchor for a Military Technology Museum Park slated for 2019/20 completion.*





# The Ironman of RCEME Members of 3 RCR

MCpl CJ Steward, Electronic Optronic Technician, 3<sup>rd</sup> Battalion Royal Canadian Regiment

*The 2014 2 CMBG Ironman competition was supposed to be like every other. A thirty-two kilometre march, a four kilometre portage, an 8 kilometre paddle in a canoe and a final 6 kilometre march to the finish line. It was anything but like every other; torrential rain, punishing winds, and one metre swells made this the most challenging Ironman in decades.*

Braving the maelstrom and at the heart of the 3<sup>rd</sup> Battalion Royal Canadian Regiment (3 RCR) team was a dedicated group of RCEME soldiers. Vehicle Technicians MCpl Brian Ballantyne and Cpl Patrick Hopper, Weapons Technician Cpl Collin Parsons, and the veteran of eight Ironman competitions, EO Technician MCpl Christopher Steward. Members of 3 RCR SPSS section also competed, Supply Technician Cpl Kerth Pierre and Infantryman Cpl Leland Hogeveen.

Training was completed in line with the high physical standard set by 3 RCR. Aggressive cardio and core training coupled



From left to right: Cpl Patrick Hopper, MCpl Brian Ballantyne, MCpl Christopher Steward, Cpl Leland Hogeveen, Cpl Kerth Pierre.

*The high number of 3 RCR personnel trying out for the team meant that everyone had to earn one of the limited positions on competition day. Every RCEME member qualified after completing a mini-Ironman that was only a few kilometres short of a full race.*

with a mini-Ironman every Friday quickly put everyone in the state of mind and body necessary to complete the task ahead. The high number of 3 RCR personnel trying out for the team meant that everyone had to earn one of the limited positions on competition day. Every RCEME member qualified after completing a mini-Ironman that was only a few kilometres short of a full race.

Despite the atrocious weather conditions on both days of the competition, all members of 3 RCR maintenance platoon completed the race.

Cpl Pierre finished in 9:10 on the first day, slowing down only to rescue a fellow competitor while canoeing. On the second day Cpl Parsons was the first RCEME soldier to finish with a total time of 7:51, MCpl Steward shortly after at 8:08, and a one second difference dramatic photo finish between MCpl Ballantyne and Cpl Hopper at 8:47. Cpl Hogeveen finished in 9:05 having capsized on the water, but proved his tenacity by not quitting.

Proud of what they accomplished, and as one they agreed: when does training start for next year?



The guys in action.

Top left: Cpl Patrick Hopper

Top right: MCpl Brian Ballantyne and Cpl Patrick Hopper

Opposite: MCpl Christopher Steward



# 13<sup>th</sup> Annual Warrant Officer J.R. Muise Memorial Hockey Tournament

Captain M.J.L. St-Maurice, 2IC Vehicle Company, RCEME School

***On behalf of the Corps of RCEME, the RCEME School hosted Warrant Officer J.R. Muise hockey tournament 21 - 23 November 2014. This year saw 197 hockey players accommodated, fed and hydrated - one way or another! With 14 hockey teams participating in the tournament, including the British REME Stallions and the British Army Training Unit Suffield (BATUS) Workshop, there were 27 games played and fortunately only a very short list of one injury treated by St John's Ambulance. This was the second year that the annual tournament was shortened to a 3 day action packed late-night affair and it was once again a success!***



**Presentation of the Heart Trophy (from left to right): CWO Moreau, Col Doyon, Mrs. Marilyn Muise, Maj Robb, LCol Dencsak, CWO Godbout, REME Col (ret'd) Edwards.**

**Photograph – Sgt Peter McFarlane**

We were delighted again this year to have the tournament officially opened with the singing of a heartfelt rendition of Highway of Heroes, God Save the Queen and the O Canada Anthem by Country Music recording artist and Beeton resident, Naomi Bristow. Special guests for the Opening Ceremonies and closing ceremonies included Marilyn Muise who came all the way from Arcadia, Nova Scotia, her daughter Christa, Col (ret'd) John Edwards representing REME

Hockey, as well as the Base Commander and Base CWO, Col Carl Doyon and CWO Gilles Godbout.

Throughout the weekend, there were many hard fought games in all three divisions with 2 Division A and B teams winning the Arte and the Marte divisions respectively and the RCEME School winning the Sadie division. Marilyn Muise presented the Heart Trophy, awarded annually to the player who best represents the quality of “playing with heart” to Maj Robb, from the BATUS Wolves, who demonstrated heart and spirit throughout the tournament even though his team was defeated in every game they played.

A big thank you goes out to all the units that participated and made the 13<sup>th</sup> Annual Warrant Officer J.R. Muise Memorial Hockey Tournament a huge success.

## 2 Canadian Division win big at the RCEME Corps National Hockey Tournament at Borden

CWO Rodrigue, ETSM, 2 Div CA

***Once again, the three RCEME teams stood out from the competition at the national RCEME Corps hockey tournament. The players representing 2 Canadian Division (2 Cdn Div) showed courage and determination as they took top honours.***

At the tournament held at Borden, 2 Cdn Div was represented by three teams, one each in categories A, B and C. The teams in categories A and B won gold medals, while the Category C team won silver. Never has another organization performed such a feat at this tournament. The takeaways from the teams' incredible performances were the desire to win, and the fortitude of the players and coaches who were able to give our teams that extra push.

Also, we would be remiss if we did not mention the excellent support (laced with humour) provided by WO Stéphane Morrisette and logistics officer MCpl Simon Thériault—the positive impact of their efforts helped our teams enjoy such success!

It is achievements such as these that reinforce the cohesion of the Corps and encourage the next generation to perform in order to achieve high-level objectives. Bravo Zulu to all 2 Cdn Div participants!



**Sgt Peter McFarlane**



# Operation Lutin Blindé – Helping Santa Claus in the Style of the Army Equipment Fielding Centre (AEFC)

Maj Ugo Leblond-Fortin, Cmdt AEFC

***In these challenging times for Defence resources, the sound management of the CAF's land vehicles fleet is an area in which the AEFC excels. The General Headquarters (GH) of the Canadian Army (CA) therefore wanted to redistribute 60 Tracked Light Armoured Vehicles (TLAVs) within its formations. Since the redistribution had to be completed before the holiday season, it was normal that the CA's GH give this mandate to the AEFC.***

Preparing vehicles for redistribution is an intense job of coordination among the various stakeholders (Life Cycle Material Managers, Strategic Headquarters and Formation Headquarters, as well as certain external organizations). Logistical coordination was essential to ensure a successful operation.

When a TLAV needs to be prepared for redistribution, the work begins with a mechanical inspection to ensure that the vehicle can be loaded, unloaded and safely mobile for operators. Then, an inspection of the communications system is required. It must be functional, and missing items must be identified in order to accelerate reception for the unit that has won the vehicle. Lastly, a number of pieces of auxiliary equipment that are included



***Maj Ugo Leblond-Fortin (left), Cmdt of the Army Equipment Fielding Centre presents a plaque highlighting the completion of Operation LUTIN BLINDÉ to LCol Marc Parent (right), G4 Operations, Canadian Army.***

with these vehicles must be prepared for transportation, and procurement transactions must be completed.

An operation of this scope for a unit the size of the AEFC is a complex task in the best of situations, but the efficient work of the unit's personnel, both in terms of planning and employees, made it possible to complete the task on schedule.

While formation members are unloading their TLAV and are happy to have the required equipment to carry out their mandate, AEFC members, who are always proud of their contribution to the success of the institution, go on with their work to ensure that the land equipment fleet is operational and ready to go.

## Official Visit of RCEME Command Team in Valcartier, Quebec

***Souvenir photo of the guest book signing of 5 Service Battalion (5 Svc Bn) during the official visit of RCEME Corps Director, Col Hamilton, on 12 February, 2015. Col Hamilton was accompanied by the Corps Colonel Commandant, Col (ret'd) Nellestyn, Corps SM, CWO Gilbert, CO 5 Svc Bn, LCol Matsalla and RSM 5 Svc Bn, CWO Sergerie.***





## Message from OA and AOA

Maj Jason Van Dyk, Vehicle Technician Occupational Advisor  
CWO Pierre Tremblay, Vehicle Technician Assistant Occupational Advisor

***The Vehicle Technician Occupation Advisor (OA), Maj Jason Van Dyk and his Assistant Occupation Advisor (AOA) CWO Pierre Tremblay, would like to take the opportunity to provide a few short words to the Vehicle Technicians whom we represent. Firstly we would like to tell you how proud we are to have been given the opportunity by the RCME Corps Director, and are excited for the opportunity to make a difference. As Occupation Advisors, we represent all Vehicle Technicians, so it is imperative that we listen to what our technicians have to say. You are our eyes and ears, so if you observe a deficiency from a technical or training perspective, especially one that may affect the trade nationwide, ensure that it is brought to our attention through the appropriate chain. Our role is to provide advice and assistance to the Corps Advisor and Staff on topics specific to the Vehicle Technician Occupation. Here is some example of some current issues that we are working on.***

### EROC Training

Some units are suffering from a lack of technical knowledge and formal training to diagnose and repair this fleet efficiently. Currently we are seeking a training needs analysis, and will work closely with interested parties to develop short and longer term solutions, such as formalized training from the RCME school.

### Army Vehicle Crew Commander (AVCC)

There are several challenges to qualify Crew Commanders on our armoured vehicles. The AVCC qualification is required to increase the tactical knowledge, safety and establish a standard as Crew Leader to successfully command an armoured vehicle tactically. The prerequisites for this qualification and the length of this training present challenges for our first and second line workshops, leading to a smaller pool of qualified crew commanders and complicating the employment/flexibility of the armoured MRT and Recovery fleet. These challenges are noted we will continue to analyze the issue, making recommendations where possible.

### Medium Support Vehicle System (MSVS)

As you've probably heard, soon our good old Medium Logistics Vehicle Wheeled (MLVW) will be replaced with the new MSVS, and some of these trucks will be equipped with new Special Equipment Vehicles (SEVs). We have invested a significant amount of time to identify all the equipment and tools needed to properly equip the new variants of SEV which will



**Vehicle technicians from 5 Service Battalion performing different tasks on the axles of Heavy Logistics Vehicle Wheeled (HLVW).**

be installed on our Mobile Repair Team (MRT) vehicles in second line units, tool-cribs and our components workshops.

Finally, we would like to take the opportunity to say «Thank You» to the

people of the Maintenance Company, 2 Svc Bn in Petawawa for their support and for gathering all the necessary tools to start the Preliminary Design Review for the MRT.



**Left photo: Vehicle Technicians from 5 Service Battalion, doing a repair in the accelerator pedal section, clutch and brakes of a truck tractor. Right photo: vehicle technicians connect brake hoses after changing the master cylinder of a Light Support Vehicle Wheeled (LSVW).**





# Update on the new Developmental Period 1

Cpl Marc-André Aubin-Prince, EO Tech, Maint Coy, 5 CDSG

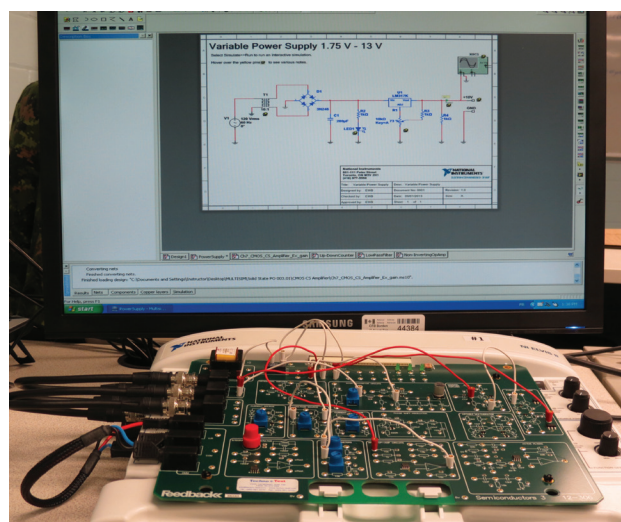
***EX LION INTRÉPIDE, which took place in April 2012, was a regular event for me at CFB Gagetown. It was during this exercise that I heard for the first time, at least officially, about the project to develop the new Developmental Period 1 (DP1) for Electronic-Optronic (EO) Technicians. At that time, I had no inkling that I would be posted to CFB Borden in September of that same year and play a major role in the development of this new course***

In February 2011, to meet Land Force requirements, the Training Plan Writing Board revamped the training of EO Technicians by making major changes to the teaching points. It was not until September 2012 that the team tasked with developing the new DP1 course for EO technicians was created. Our mandate was to complete this task for April 2013. This included writing the Performance Oriented Electronics Training (POET) course, previously taught by the Canadian Forces School of Communications and Electronics (CFSCE) in Kingston.

We were tasked with developing lesson plans, practical exercises, PowerPoint presentations, question banks and student handbooks. To do this, we had access to the support and expertise of Sgt Sévigny's team at the Valcartier On Job Training (OJT) Centre and the Royal Canadian Electrical Mechanical Engineering School (RCEME School) at Gagetown. After some headaches and endless rounds of Order Groups, we were able to develop quality material for future students of the DP1 course for EO Technicians.

Four classes have graduated, in both English and in French, since the pilot DP1 course was first implemented in April 2013. To be sure, some improvements have been made to improve the overall course content. For example, the Radiation Safety Course has been changed from a classroom course to a training course on the Defence Learning Network (DLN). The ongoing improvements to training

aids like the electronic diagnostic box in the EO on direct current theory and the addition of the LAV 6.0 are just a couple of examples of course upgrades.



**The ELVIS II platform used with the software Multisim 12 and the Feedback cards for electronics training at the RCEME School.**

**Photograph: Cpl Aubin-Prince**

*The final goal is to equip all OJT centres with Multisim 12 and ELVIS II programs to provide for uniformity at all FCE centres across Canada.*

The challenge here is enormous because modernization necessarily means the purchase of new equipment and the learning of new technologies. In fact, the RCEME School has acquired Multisim 12

software to facilitate the training of new EOs. Multisim 12 is an electronic circuit simulator designed by National Instruments. This program already proved its worth in 2009

when it was implemented by WO Sylvain Guillemette at the OJT Centre Valcartier. Whether by pure luck or meticulous planning, WO Guillemette played an active role in installing the Multisim 12 software at the Artisan Company RCEME School. The ELVIS II platforms (Educational Laboratory Virtual Suit II) acquired by RCEME School are used as physical interfaces to complement the Multisim 12 software. Students first construct their circuits using Multisim 12 and then use real components on the mounting panel and verify their operation.

The final goal of the project is to equip all OJT centres with Multisim 12 and ELVIS II programs to provide for uniformity at all OJT centres across Canada. This will allow technicians to pursue their training continuously and effectively irrespective of their geographical region. To achieve this, the Centre of Excellence has provided each centre with Multisim programs and the necessary ELVIS platforms.

In conclusion, I should mention here that the master corporals and sergeants of the Artisan Company's EO PI at RCEME School Borden were awarded a commendation from the Commandant of the Combat Training Centre CFB Gagetown for their hard work and their leadership in supporting development at the Centre of Excellence.



**Materials  
Technician**

## Tons of projects for the Mat Techs of 1 Svc Bn!

Cpl Keith Valad, Materials Technician, 1 Svc Bn Maint Coy

***It has been a busy year for the Maintenance Company (Maint Coy) Paint & Body Shop at 1 Service Battalion (1 Svc Bn). Some major events took place in a fairly short time frame, including the PPCLI 100<sup>th</sup> anniversary and the new 3<sup>rd</sup> Canadian Division Headquarters (3 Cdn Div HQ) built in Edmonton Garrison. There was no shortage of projects. Materials (Mat) Section Body Shop headed by MCpl Patrick Blount along with his 2IC Cpl Keith Valad, with help from Cpl Jean-Marc Trudel, and Cpl Neil Dancer collectively took on the momentous task of restoring historical vehicles and artillery pieces for display as monuments.***

First up was a Tow-Under-Armour (TUA) which has been sitting on a cement pad for some years after it was removed from service. This job was quite the undertaking, not only because of the size of the vehicle, but also the unique paint scheme which proved to be just some of the hurdles the Paint & Body section needed to overcome. The old TUA had more than a couple coats of paint which needed to be stripped down. That process took longer than expected since sandblasting was not an option due to financial and time constraints. Once that was completed the whole vehicle needed to be primed and two coats of olive drab paint applied. Once it was a solid green it



***The TUA after restoration***

needed the tri-colour camouflage pattern which is no longer in use; so the technicians had to free-hand the entire pattern using old pictures and their own eye for detail. The vehicle now sits proudly in front of the new Division HQ building as part of its “all around defence”.

Next, was a 1952 M37 4x4 owned by the PPCLI. Once this beauty drove in, it garnered huge interest by every passerby. It seemed like everyone and their uncle wanted to get in and drive it home. It was

amazing to see the overall shape this truck was in. There was very little rust, very little body damage, and the kicker was it was still a runner! So with enthusiasm high, the Mat Techs once again got to work ripping it apart. Keep in mind the shop was still full and the TUA was still in the paint booth. Since the M37 was a fair bit smaller and in such good shape, they decided to take off as many parts as possible. Once that was done, they stepped back and noticed it had close to 1000 different parts filling two shops that now had to be prepped, primed, painted, and reassembled. Once painted, they had the daunting task to reassemble the entire truck, of course with the main goal was not to have any “spare parts” left over. With some new wood supplied by the non-tech workshop at 1 Svc Bn we were able to construct new box rails and benches to put in the back of the truck. It was finally completed in time for the festivities as one of the “mainstays” for the PPCLI’s 100th year anniversary. Now it is proudly on display at the Museum of the Regiments in Calgary, Alberta.

Last but not least, the Mat Shop was tasked with restoring two German First World War 7.7 cm Feldkanone (Field Cannons). The history of these two artifacts is quite amazing, with these guns being captured by the 49<sup>th</sup> Battalion CEF near Marquion, France on 27 September 1918. To restore them to their proper WWI state, it was decided to have the guns sandblasted, and

***Right: One of the two restored German First World War 7.7 cm Feldkanone (Field Cannons).***



***The famous M37 4x4 restored by the Mat Techs of 1 Svc Bn for the 100<sup>th</sup> anniversary of PPCLI.***

to our surprise, underneath the old paint there was a slew of armourer’s marks and a beautiful cipher on the barrel. As the guns were being prepped, the Mat Techs noticed the wheels were about to fall apart. So they quickly contracted a local wheelwright to redo them as they were when they were new, almost 100 years ago. They then repainted the “Feldkanones” in Panzer grey and once again called on their friends in non-tech to stain and varnish the wooden wheels and seats. Once we received the wheels they were installed and the guns were promptly picked up in December and placed as part of the all around defence at the HQ building.

We definitely do not have the time to get bored as materials technician at 1 Svc Bn!







# Falling to the Level of our Training

CWO Jeff Saunders, Assistant Occupation Advisor for Weapons Technicians

***The topic of Weapons Technician training is something that I am tremendously passionate about. Throughout my career I have seen a number of changes in the training system and the way we conduct trainings and there have been a number of training initiatives that have taken place within the trade over the past year.***

***In my “spacious” cubicle on the third floor of the Louis St Laurent building I have two quotes affixed to my book shelf, both related to training. The one I will focus on today is a quote from Archilochus a Greek soldier poet which states “We do not rise to the level of our expectations; we fall to the level of our training”. I have always considered this to be a simple truth, something worth remembering.***

Training is arguably the most important aspect of what we do as technicians and what and how we train is continuously changing. We must remember that training is cyclic and always in flux and all those involved are working towards the same goal to maintain a high level of training. Change should not be viewed as a threat, but as opportunity to influence how we train and to re-examine how we develop our replacements in the workshop.

2014 saw many such opportunities with regard to Weapons Technician training. The High Security Containers OSS, the Primary Reserve DP 2.1 course and our most senior technical course, the DP3, have all moved to the RCME School Det Gagetown to better utilize their resources. The Center of Excellence ran, in addition to its normal compliment of courses, the Leopard Tank OSS pilot in April and the new DP1 Pilot course that is about to graduate.

Interestingly, training opportunities were not limited to training establishments. Equipment



Photo : Combat Camera

Management Teams working at the strategic level sought out opportunities to support training. 25mm cannon unjamming training was provided by the OEM and their comprehensive knowledge of the armament systems they support have positively influenced maintenance practices of technicians today and in the future. Finally Weapons Technicians from SOFCOM, DGLEPM and Tech Services in CFB Gagetown came together to develop and deliver training material for the Advanced Sniper course. This was tremendously well received by the sniper community and will be a harbinger of improvements in our ability to support that community in the future.

In 2014, we not only fell to our level of training but clearly rose beyond. The dedication of the numerous stakeholders within and outside training systems is a testament support to continued focus on training our Weapons Technicians. Bravo Zulu to everyone involved.

*We must remember that training is cyclic and always in flux and all those involved are working towards the same goal to maintain a high level of training.*



# Caseless Ammunition?

Capt Matthew Nixon, DGLEPM, DAEME 4-2

**While studying at the Royal Military College of Canada in the Ammunition and Explosive Engineering post graduate program, I completed a project concerning the internal ballistics of caseless ammunition. The Heckler and Koch G11 caseless ammunition was of particular interest due to innovative engineering applied to solve technical issues such as premature ignition, increasing the rate of fire, and reducing the mass of ammunition.**

One major technical issue with caseless ammunition is heat dissipation. Rifles primarily dissipate heat through their barrel into the environment via convection and radiation. Traditional brass cartridge cases also absorb heat in the chamber through conduction. Extremely high chamber temperatures can result in premature ignition of propellant.

With cased ammunition, the ejected cartridge cases help to reduce chamber

*With no cartridge case to extract or eject, caseless ammunition makes higher rates of fire possible. The G11 rifle three round burst reached rates of fire of 2000 rounds per minute.*

Heckler and Koch prevented premature propellant ignition through the introduction of High Ignition Temperature Propellant (HITP). The higher acceptable operating temperature of the HITP also allowed for longer durations of rapid fire than traditional cased ammunition.

With no cartridge case to extract or eject, caseless ammunition makes higher rates of fire possible. The G11 rifle three round burst reached rates of fire of 2000 rounds per minute. The high rate of fire, combined with an innovative three round burst recoil system, translated to increased rifle accuracy during automatic fire. With soldier trials a success, the G11 was selected to

replace the G3 rifle for West Germany's Bundeswehr (Federal Defence). However, fielding of the G11 was cancelled with the German re-unification in 1990 and the 7.62 x 51 NATO G3 rifle continued as the Bundeswehr's combat rifle.

In 1990 Heckler and Koch transferred their caseless ammunition technology to the Armament Research Development and Engineering Center (ARDEC) for the US Advanced Combat Rifle (ACR)

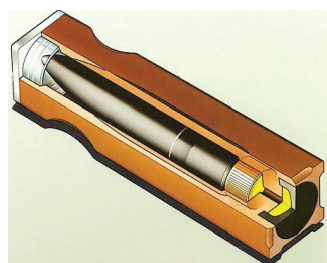
project. Although improvements in first round hit probabilities were realized, trial requirements were not achieved and the project was cancelled.

In 2005 the US Lightweight Small Arms Technologies (LSAT) project continued HITP caseless ammunition development to evaluate potential reductions to soldier combat loads. Caseless ammunition exceeded project goals reducing ammunition mass by 51%.

Technical challenges in the implementation of caseless ammunition are still being investigated through current US and Canadian small arms projects. With potential enhanced rates of fire, and significant reductions to ammunition mass caseless ammunition will have an important role in the future of small arms.



**Above: H&K G11 caseless ammunition rifle cutaway.**



**Left: H&K G11 4.73 x 33 mm caseless ammunition.**

temperature. The G11 4.73 x 33 mm caseless ammunition is a projectile seated within formed propellant. With no cartridge case to eject, the temperature of the chamber increases more rapidly. As the propellant is in direct contact with the chamber walls, another method of temperature management had to be developed to prevent propellant from igniting prematurely.



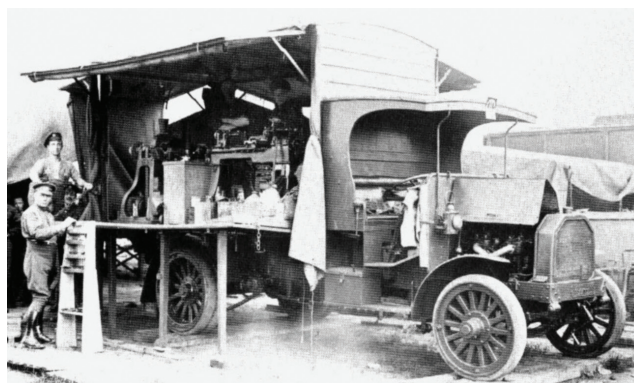
**From left to right: 5.56 mm cased, 5.56 mm LSAT caseless, 5.56 mm LSAT polymer cased**



# Setting the RCEME Standard

Murray Johnston

*The purpose of RCEME is to keep equipment serviceable under all circumstances, dangerous, difficult, and dirty. The standard for that was set by the Craftsmen of 26 Ordnance Mobile Workshop Light and the Commander of 1<sup>st</sup> British Army during the lead up to the Battle of Vimy Ridge April 9, 1917 and during the battle itself. The workshop's war diary for April 1917 as written by Major A.S. Buttenshaw, the Chief IOM (Inspector of Ordnance Machinery, to-day's RCEME Officer) of the Canadian Corps, says it all.*



**April 1, 1917.** Overhaul and repair of guns, vehicles and artillery equipment for four brigades of army field artillery, and four batteries of heavy, and siege artillery Canadian Corps.

**April 2, 1917.** Received orders to push on with work in order to have all guns in action by night 7<sup>th</sup>-8<sup>th</sup>. Bombardment on continuously. Many Axial Vents from breech mechanisms of heavy and siege guns arriving in workshop. This work should not be done in light workshops as it keeps lathes employed night and day and prevents them from being used for other work. No spares available so it has become necessary to work all night to keep guns in action. This shows neglect on part of those responsible, as the question of spare parts of all kinds was raised as soon as the experience of the Somme Campaign showed the vital necessity of maintaining a large stock of spare gun parts, especially Axial vents.

**April 3, 1917.** Those responsible trusting,

as usual, luck and small workshops. Luck holding, as light guns holding up well and so far not causing any trouble. Hope lathes or engines will not break down.

**April 7, 1917.** Shop almost empty. Guns now required for night of 8<sup>th</sup>-9<sup>th</sup>. Nearly caught up with Axial Vents.

**April 8, 1917.** Principal IOM (D RCEME Cdn Corps) from GHQ inspected shop. Was pleased. Shop empty, all my guns are in action. Inspected 6-inch mark VII guns at St. Aubin of 58<sup>th</sup> Siege Battery.

**April 10, 1917.** Still working day and night on repairs. Men sticking to it wonderfully. Reduction of rate of fire for all natures of guns and Howitzers materially assisted in keeping so many in action during this battle.

**April 14, 1917.** Received a letter of congratulations from Army Commander which says in part, "thanks to all ranks of the Ordnance in the First Army for the excellent work which they have done, and great assistance which they have given to the artillery prior to the present operations. For an opening under present conditions the keeping of guns in action at rapid rates of fire for prolonged periods is absolutely essential and puts equipment to a severe test. It is a great tribute to the excellence of the work done in overhauling guns which have arrived in this Army, in most cases in a bad condition

that the Canadian Corps Heavy Artillery had a higher percentage of guns in action on the night of the 9<sup>th</sup> after the attack than they had at any time during the previous weeks."

This refers to the whole winter's work of careful and complete overhaul of guns and equipment as well as to the work just previous to the attack of 9<sup>th</sup> April. Very cheering. Read it out on parade to the men.

**April 21, 1917.** New workshop approved. My Workshop Sergeant-Major, Armament Artificer Sergeant-Major H Durling, is to be IOM and OIC of the new workshop. Thus the (Canadian) Corps will have two Canadian Workshops.

Armt ASM Durling was duly commissioned from the ranks, promoted to Captain and posted as OIC to the new workshop. In an air raid by enemy aircraft in November 1918, a stores tent and an ammunition dump were set on fire. Captain Durling removed the petrol and workshop lorry to a safe place. While doing this he was in full view from the glare of the conflagration and was bombed by enemy aeroplanes. Through his efforts valuable property was rescued and repairs to the guns continued the next morning. Captain Durling was awarded the Military Cross. Major Buttenshaw was awarded the Distinguished Service Order for his work with the guns before and during the Battle for Vimy.



Repair workshop in a Lorry during World War I.

# Base Maintenance CFB Borden Assists the City of Barrie to Maintain Local Heritage

By MWO J.D. Hans Croteau, ETQMS, Base Maint Borden

*In August 2014, the City of Barrie approached Base Maint Borden to assist in refurbishing a piece of military heritage in order to give the 155-mm Howitzer M1A1 Cdn on Carriage M1A2 Cdn some sort of a beauty lift for the years to come. It did not take much to convince us that as part of our RCEME ethics, we cannot leave a piece of ordinance in such a bad shape.*

## Background history of the M1A1 Howitzer

While Canada post WWII did not need a wealth of weaponry during peacetime, it was decided early on that it must be able to deploy with its own weapons and also it must soon meet NATO requirements. The decision was made to lean towards American made weapons for the standardization approach, and for medium artillery the winner was the American 155mm caliber.

Thus, in 1951, the Canadian Army replaced the older British weapons with the American M1 (later M114) 155mm towed Howitzer. This was chosen over the bigger M1 155mm gun as that was considered heavy artillery, and at the time every American division had one battalion of 155mm howitzers. They modified it slightly to become the M114 Cdn as of 1962. Each regiment of the Royal Canadian Horse Artillery (RCHA) had one, six or eight gun battery of M114 Cdn guns and three 105mm ones. The M114 Cdn was a popular weapon, but as everyone else switched to modern support weapons, the Canadian Army followed suit in 1966 and purchased fifty M109 Howitzers and

disposed of the 155-mm Howitzer M1A1 Cdn soon after.

Most of these guns are now displayed across the country. Actually, there are at least 28 of them across Canada, to include outside Kamloops Armoury in B.C., one in the RCA Museum in CFB Shilo, two in 1<sup>st</sup> Regiment Royal Canadian Artillery Museum. Two more stand guard at the National Military Cemetery in Ottawa, one at the West Gate in Kingston and one of them here in the city of Barrie by the waterfront.

## Restoration Challenge

After being brought to a local contractor to be fully sandblasted, the gun was brought to Base Maint by our recovery crew. They had to use some imagination to get it in our facilities due to the lack of capacity to fold the legs and the size of the piece which was just at the limit to the provincial road height laws. Our body shop experts gave an appropriate color in accordance with the original olive drab pattern. After a couple coats and a good dry, it was almost ready for detail work to include new tires, cleaning of the brass plaque, an add on plaque mentioning date of refurbishing and organizations involved in the face lift.

The gun was then returned to the city of Barrie and will soon return to its original location upon completion of a new pad.



*Personnel of Base Maint Borden involved in coordinating, planning and refurbishing the 155-mm Howitzer M1A1 Cdn on a Carriage M1A2 Cdn.*

*From left to right: MWO Hans Croteau, Mr. Danny Laws, Mr. Jeff Mosher, Mr. Karl Haza, Mr. Stephen Worrall, Cpl Misch, Mr. Lance Hillier, MCpl Scott Dickson, Cpl Duncan Brodie, Cpl Kyle Dressler and Sgt Wendell Hayden.*



*155-mm Howitzer M1A1 Cdn on a Carriage M1A2 Cdn as it was gave back to the city of Barrie.*

It will proudly be displayed for years to come part of the Heritage Park by the City Waterfront to perpetuate our military past and proudly represent the men and women who served either as operators but or maintainers and showed their professionalism and dedication to their work. This is again a good example of the strong link that unifies local communities with the military where the RCEME folks proved again that their interest in supporting such an initiative can only reflect their pride in what they do for Canadian citizens.



# A RCEME Soldier's Story: PCA's War

Carole Jerome (daughter of Paul Chenery Anderson)

***During World War II, RCEME soldier Paul Chenery Anderson wrote over five hundred letters home to his wife Phyllis, as well as a diary he kept from the time he crossed the Channel as part of the Normandy Invasion. After four years of work, his daughter, former CBC journalist Carole Chenery Jerome has finished writing PCA's War, a memoir in which the letters are illuminated with historical accounts of the wider war as her father makes his way from training in Canada, across the Atlantic to further training in England, then to Normandy, through Northern France, into Belgium and Holland and finally Germany as Hitler's Nazi Reich is finally defeated.***



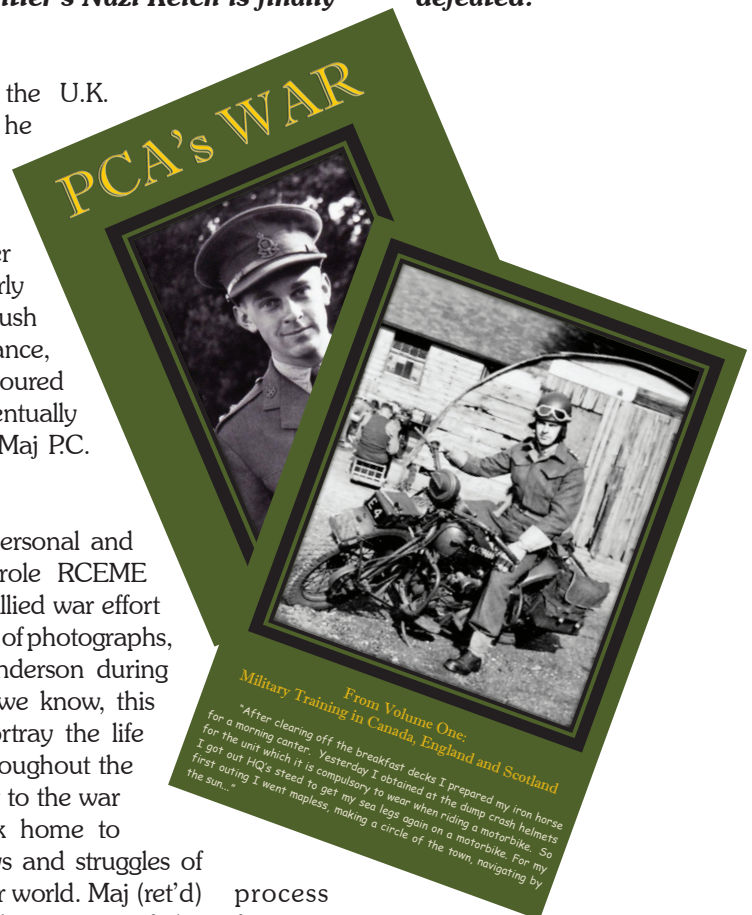
Major Paul Anderson in 1945.

From training at Camp Niagara as a young cadet straight out of University of Toronto Engineering, Paul went to Camp Borden where he became a Lieutenant. He and his bride Phyllis Hannaford left for the Maritimes right after their wedding on February 21 1941, first to Saint John with the Royal Canadian Ordnance Corps (RCOC) at Camp Sussex, and then to Debert Camp in Nova Scotia.

troops assembling in the U.K. Promoted to Captain, he finally crossed the Channel with the 2<sup>nd</sup> Infantry Division, landing at Graye-sur-Mer on Juno Beach in early July 1944. During the push through Northern France, he moved to 2<sup>nd</sup> Armoured Brigade, and eventually joined RCEME HQ as Maj P.C. Anderson.

His memoir is highly personal and brings alive the vital role RCEME played in keeping the Allied war effort rolling. There are dozens of photographs, many taken by Maj Anderson during those years. As far as we know, this is the only book to portray the life of a RCEME soldier throughout the war years, from training to the war theatre, and then back home to Canada and all the joys and struggles of adjusting to the post war world. Maj (ret'd) George Chabrol considers it one of the finest books he has ever read on the story of RCEME in the Second World War.

For now, it has only been printed in a very limited two-volume hardcover edition for Maj Anderson's family, with a few



process for a one-volume version to be edited by Ms. Jerome, in collaboration with RCEME historian Col (ret'd) Murray Johnston, and archivist, Maj (ret'd) Doug Knight, who both helped with the original manuscript. The abridged volume would eventually be available for wider readership, both as a softcover and electronically.

There are two sets of the full version of PCA's War in the Heritage Collection at the RCEME School at CFB Borden. These are available on loan to staff, students and RCEME members through the Corps Adjutant's Office.

*His memoir is highly personal and brings alive the vital role RCEME played in keeping the Allied war effort rolling. [...] Maj George Chabrol considers it one of the finest books he has ever read on the story of RCEME in the Second World War.*

That September he sailed for England for more than three more years of training along with the thousands of Canadian

made available to RCEME. But Colonel Commandant of the RCEME Corps Col (ret'd) Andrew Nellestyn has put plans in

# The Extraordinary Story of Harry Lovelace

Gordon Lovelace (Son of Harry Lovelace)

***Harry Lovelace never made any great fuss about the British Empire Medal (BEM) that was part of his “gongs” during formal occasions at the Legion chapter in his adopted home town of Kenogami in the Saguenay Valley region of Quebec, but his fellow members certainly recognized how special it was. Upon being introduced to Harry by his comrades, the standard introduction for visitors to the branch was: “Shake the hand that shook the hand that patted the bum of the Queen!”***

This irreverent reference to the ceremony in Buckingham Palace in 1945, when his BEM was indeed accompanied by a handshake from the King, did not bother him. Harry was pretty irreverent anyway, as a soldier and civilian. He would never let his sons refer to anyone as “sir”.

When pressed by family and friends about this medal, one of only 27 presented to the thousands of soldiers who served in the Second World War in the ranks of the Royal Canadian Electrical and Mechanical Engineers (RCEME), he dismissed the distinction as an award “for running a repair workshop in England.” That was correct, as far as that general description went, but was a little short of the full story. Also untold, up until now for the first time, is that the desperate efforts made by this proud Canadian to join the military may have left him in his eternal cemetery plot as ... an American!

Harold Leonard Lovelace was born February 24, 1905, only child of a blacksmith in Rollingdam, in the southwest corner of New Brunswick, a rural settlement of a few dozen souls whose closest built-up town hours away, by horse buggy or sleigh, was St. Stephen, hugging the border with Maine. Harry wasn't born in Rollingdam, or St. Stephen or even in Canada, because the sensible thing to do back then—for women who might give birth in the winter isolated behind snow drifts three metres high—was to dispatch them by train in their last trimester to the inevitable cousins living in warmer climes around Boston. He was therefore born in Lawrence, MA, and returned with his mom to Rollingdam, when snow thawed, to be baptized in the local church, according to a document that still exists and affected his

life just about forever...

Harry went to the local Rollingdam one-room school, helping his dad at night at the blacksmith shop, graduated and then went cutting pulpwood in Maine. He had to return early in the fall when the schoolteacher died suddenly, causing the local trustees to parachute the recent grad into the teaching job until a replacement could be found.



He never went back to the woods after a grateful school trustee hired him as a car mechanic in St. Stephen. And that's where the legend began that Harry had some kind of psychic connection with anything mechanical.

Local St. Stephen legend has it that he was the only mechanic on the planet who never got dirty because he would listen to a car engine and guide the owners into doing



**Harry Lovelace (on the right).**

their own hands-on repairs to solve any problem, leaving them so thrilled at their amateur tinkering that they were actually happy to pay the repair bill.

He married local beauty Thelma Kennedy in 1931 just as the worsening depression forced him and many others to leave the region to find work elsewhere. He was a horse-riding cowhand out in Alberta until he returned home as mechanic for a new car dealership in St. Stephen.

Sons Bill and Pete were born in 1938 and 1939. When the war broke out, Harry wanted to sign up with everyone else but was quickly disabused of that idea by Thelma, who was coping with one toddler and another baby on the way (Pete was born in November, two months after German troops invaded Poland). When the boys got a little older, he tried again in 1940 only to find himself with two problems. For a start, he was simply really old at 35. In the early months of the war, Canada could barely handle the onslaught of volunteers in their teens and early 20s. Plus he was the sole support of a wife, two infants and his aging parents.

So, Harry waited well into late 1940. And Harry suddenly got younger in 1941.... He took that old baptismal certificate and changed the birthday of 1905 to 1908. It was a terrible forgery. The army recruiters, now faced with more demand to find technical skills rather than rifle-carriers, developed a strange double-case of temporary blindness and memory loss to ignore the doctored document and put “the



old guy" in uniform. (Tony et al: we don't have any evidence to suggest when he was finally accepted by the army and went overseas, but suspect 1941. He was definitely a fixture in England in early 1942.)

The new recruit did his normal basic training in Canada before shipping out to spending almost four years at the RCME's 1st Canadian Base Workshop in England where the family blacksmith genes fit perfectly with the raw material of heavy military equipment and the war-time need to find quicker and better ways to maintain them.

One of the surviving documents from that era has the officer commanding referring to then Quartermaster-Sergeant (QMS) Lovelace as senior NCO "...in charge of...shops with a peak strength of eight hundred..." engaged in overhaul and modification of tanks and other heavy vehicles. "Many of the labour saving equipment used in this shop owe much of their design and development to this NCO's initiative."

Harry was awarded Canadian Army patents on a number of these devices, many of which were adopted across the military and in the civilian corporate sector, but derived no financial benefit. After the war, Parliament determined that these inventions were developed with taxpayer money and the resulting patents belong to the Crown. The Crown did nothing with them and they just expired, to the joy of the industries freed of paying royalties to anyone.

After repatriation to Canada, Harry did not demobilize immediately and spent some months as a technical lecturer at the Borden, ON, army base before getting an offer he could not refuse. The Price Brothers family, a dynasty that provided officers for both the Canadian and British armies, raided the RCME post-war to find talent to upgrade their massive pulp and paper holdings in Quebec's Saguenay Valley.



**Harry Lovelace (on the left with a dark jacket) during formal occasions at the Legion chapter in his adopted home town of Kenogami.**

In 1946, Harry Lovelace joined the migration as a senior mechanic in the company's biggest mill in Kenogami, a town of 13,000 that was 100 times the population of Rollingdam. He quickly applied his technical skills and experience to the challenge of another huge operation, developing jigs, short-cuts and other innovations that saw him rise quickly

*Many of the labour saving equipment used in this shop owe much of their design and development to this NCO's initiative.*

within the company ranks, from Master mechanic to Machine shop foreman and Mechanical manager.

Harry's third and last son, Gordon, was born in 1947, a bit of a surprise to 40-year-old Thelma and her allegedly younger husband.

After years of uncertainty and long separations, the family settled into a life of security and middle-class comfort in a newly-built home rented from Harry's employer.

Once into their 60s, Harry and Thelma started looking for a place to retire,

eventually settling on the town of Carleton Place, Ontario. But there would be no mandatory retirement at 65 for Harry. All his documents were based on that forged baptismal certificate and he was actually past 67 when he served his last day as mechanical operations director of the Kenogami mill and joined Thelma in Carleton Place.

The retirement present from the three boys was a trip anywhere in the world. Harry and Thelma decided they would like to retrace Harry's war-time travels in England, France and Belgium. When they applied for passports, however, the forged certificate set off all kinds of alarms. Considering these circumstances, he was given the opportunity to make everything right by simply going before a citizenship judge and swear allegiance to Her Majesty and Canada.

Harry refused, despite the caution that the only undocored evidence of his citizenship was a birth certificate from a Massachusetts hospital showing him born as an American. But he sure as hell was not going to become a Canadian citizen 68 years after been born to two Canadian parents and 30 years after shaking the hand of Her Majesty's father. He and Thelma never made that trip. Neither ever got a passport.

As usual, Harry just cast the whole thing aside. He and Thelma enjoyed 20 years of retirement together before he died on Thelma's 86<sup>th</sup> birthday, Nov. 23, 1991. After years of in-jokes about his wife being a "cradle-robber", the death notice finally caught up to the truth to show he was actually 18 months older than his bride of 60 years.

It would appear the mechanic who never got dirty earned at least part of his BEM crawling through the mud to minister to the machines that always talked to him....

## Another Historical Find

WO Daniel Ferland, LESC, LESG, DGLEPM

***What precipitates a historical discovery? A few key words and a whole new initiative begins. On a stroke of luck, timing, call it what you may, a rather scarce medal earned by a RCEME soldier surfaced, for sale, at an auction on the internet.***



Staff Sergeant (SSgt) Harry Lovelace was the recipient of the British Empire Medal (BEM); one of 27 earned by RCEME members out of a total of 1248 awarded to Canadian soldiers. The medal was awarded for meritorious service which warranted such a mark of royal appreciation. SSgt Lovelace earned this mark with the following citation:

*This NCO, who came overseas with 1 Canadian Base Workshop, is one of the most valuable men in the unit. He is an inventive genius, who has devised and developed various pieces of equipment, which have been adopted either as standard equipment in the Base Workshop, or in some cases, for general use in the Canadian and British Armies. Among some of the devices designed by this NCO are a hydraulic testing apparatus for the clutch pressure spring, for GMC diesel machines (to be adopted for general use by British and Canadian forces); a holding fixture and hand ranch for a medium tank track support rollers (adopted for general use by these workshops and by several Canadian LADs); and an air wrench for medium tank track support rollers (adopted for general use by these workshops).*



**Harry Locelace (on top) and two other soldiers.**

*The foregoing developments represent a substantial saving and manpower in the unit and have been an invaluable contribution in increasing the output of the workshop. He possesses high qualities of character, dependability, and leadership, and has made*

*a contribution to the workshop much in excess of that expected from one in his rank.*

The search for the medal began with an internet search by WO Dan Ferland. With such a significant medal with an auction ending soon, he quickly contacted his historical counterpart, Sgt (ret'd) Tony Beresford to share his findings. WO Ferland then promptly contacted the Corps Adjutant's office to inquire if the Heritage Project was interested in acquiring the medal. With the assistance of Capt Dzeoba, the board agreed to purchase the medal. Due to the significant price, a fund raising effort was conducted at the NCR RCEME Day to assist paying for the medal. WO Ferland donated extra badges from his collection as prizes to promote the event.

Concurrently, Sgt (ret'd) Tony Beresford began his searches through genealogy searches and discovered SSgt Lovelace has a son, Gordon Lovelace, currently residing in Ottawa. WO Ferland contacted him to share the great news. Rather surprised with our great discovery, Gordon Lovelace assisted the search with letters, photos and humorous stories. He never saw his father's medal and was delighted to see the devotion with preserving our Corps history. How the medal ended up in the hands of a British vendor is still a mystery. We contacted the vendor and didn't receive any additional details.

With a visit from WO Ferland, Gordon Lovelace got to hold his father's BEM for the first time. He was very pleased that his father's story will continue to serve in the RCEME Corps Heritage Project. The next mission is to locate the apparatuses Harry Lovelace developed, heavily contributing to the allied victory. A great deal of thanks goes to those who assisted, especially Gordon Lovelace, Tony Beresford and Capt Dzeoba. The continuous support is essential in the preservation of our Corps History.



# Knight of the French National Order of the Legion of Honour

Annie A.-Bélanger, RCME Journal Editor

**William (Bill) Moore, RCME veteran of the Second World War, was appointed in August 2014 Knight of the National Order of the Legion of Honour, the first national orders of the Republic of France. He received this honor in recognition of his participation in the Normandy landings and his contribution to the liberation of France.**

In April 1942, Bill Moore signed up for the Canadian Officers Training Corps at the University of Toronto. In September 1942, as a Second-Lieutenant, Bill boarded the Queen Elizabeth at Halifax and arrived five days later at the port of Greenock, Scotland. He was placed with 6th Infantry Brigade Workshop, Royal Canadian Ordnance Corps and moved down to the Royal Canadian Ordnance Corps (RCOC) Headquarters in Petworth, Sussex in the south of England.

Bill was promoted to Captain in the middle of 1943 just before 6<sup>th</sup> Brigade Workshop moved down to Bekesbourne, Kent. The hangars at the aerodrome in Bekesbourne were requisitioned by the RCOC for space needed to waterproof vehicles for the Normandy Invasion, install special equipment such as flame throwers on vehicles, and convert open lorries into senior officers mobile command posts. On the 15 May, 1944, the name of the RCOC was changed to Royal Canadian Electrical and Mechanical Engineers (RCME).

D-Day, with the assault of the Canadian 3rd Division on Juno Beach, came and went while they were in Kent, and a month later Bill moved from Kent and sailed from Portsmouth with the 2 Canadian Division across to Normandy on 7 July, 1944. Bill was near Caen, France, on 10 July, a day after it was liberated, and after a short stop there, he and his unit were soon going up the Falaise road in the campaign to defeat the Germans and prevent them from escaping from Normandy. After this, 6th Infantry Brigade Workshop followed the main body of the British and Canadian Armies south through Falaise, and then north and east up through France, through Holland and finally into Germany. On 8 May, 1945, when Victory in Europe was declared, Bill was in Nijmegen, Holland, and celebrated with his brother officers at an "Its All Over!" dinner.

Captain Bill Moore returned to England in October 1945 and boarded the Queen Elizabeth home to arrive in New York on 7



**Major (ret'd) William (Bill) Moore died peacefully on 3 February, 2015 after being appointed last August Knight of the French National Order of the Legion of Honour.**

December, Pearl Harbour Day, in time for Christmas at home back with his family. In 1951, when Bill moved to Quebec with his wife Gwen, he was promoted to Major just before he helped start 25 Tech Squadron, Reserve Army, after taking the Command Staff Course provided by Headquarters at Quebec City in 1952. For four years he worked with the Reserve Army in Quebec – one memorable occasion being his participation in the Queen's Coronation Parade in 1953. Bill then left 25 Tech Squadron and Quebec in 1955 to take a job in Toronto, where he lived, close to his children and grandchildren.

Bill died peacefully at home with his bride of 63 years at his bedside on 3 February, 2015.



## Borden's Best

Helene Rowen, Gaye Somerton De Jimenez, Sherrall Brownlee and Julie Charbonneau's dedication to their specific jobs and to the school as a whole, along with a strong work ethic, are consistently reflected in outstanding results that help the RCME School operate effectively and efficiently. In many ways, these individuals are the glue that holds this HQ together and are the continuity as military members gets shuffled in and out of the HQ. Due to the significance of their contributions to the successful operation of our unit HQ, we need to let everyone know that our civilian workers are indeed Borden's Best.



## Director RCME's Coin of Excellence

### RCME COIN #59 - SGT CONSTANTINEAU

Sgt Constantineau has been awarded Director RCME's Coin of Excellence for his continuous remarkable dedication, which contributes inestimably to the advancement of our Corps and the CA. With his extensive knowledge of DRMIS, he has established an DRMIS helpdesk for 2 Cdn Div that provides support for RCME members of 35 CBG and 5 CMBG on a day-to-day basis, as well as for members of other trades within 2 Cdn Div.



### RCME COIN #60 - MCPL CAIRNS

MCpl Cairns has demonstrated an outstanding level of dedication to the Corps of RCME through the countless hours of his own time he has spent restoring a vital corps artifact, "Christine", to an almost new condition. His work is a truly exceptional example of the RCME values of technical skill and hard work that has brought a great deal of credit to the Corps.



### RCME COIN #61 - CAPT DOUCET

Due to unforeseen circumstances, Capt Doucet was selected as at the last minute to be Course Supervising Officer for the very demanding ODP 1.2 course Jun-Sep 2014. He did an outstanding job of

organizing and controlling his staff, and set very high professional standard for the officers on course. His commitment to ensuring that: "Only the best (officers) are qualified to lead the best (soldier-technicians)" is commendable.



### RCME COIN #64 - MAJ (RET'D) KNIGHT

Maj (ret'd) Doug Knight, has laboured long and hard for many years as the Corps' volunteer Archivist to assemble and preserve The Corps of RCME's historical archives. In conjunction with that he has written several authoritative books on RCME matters, e.g. Workshop Vans. He has also digitized several important historical papers such as Lieutenant-Colonel Hodgson's early Corps historical work. All of this has neatly complemented ongoing RCME Historical efforts with the result that The Corps of RCME now possesses an excellent historical framework which, most importantly, is being added to continually by all ranks of the Corps.



### RCME COIN #65 - WO MORISSETTE

WO Morissette has been awarded Director RCME's Coin of Excellence for his conspicuous dedication, tireless leadership

and the pride he brings to the Corps in the course of his work, representative activities within the organization, and his social involvement as a peer counsellor. His involvement in 5 CMBG's CBRN Decon Coy has enhanced the capabilities of its decontamination lines and helped maintain rigorous training to ensure that the formation is flexible, effective and deployable at short notice. In addition to his professional achievements, WO Morissette is heavily involved in training and coaching Corps of RCME's representative teams for 2 Cdn Div and 5 Svc Bn. He is a clear leader and an important asset to our organization.



### RCME COIN #66 - CPL MAYRAND

For his outstanding personal drive, dedication, and leadership provided The Corps of RCME and his selfless devotion to his local and military community, Cpl Mayrand is awarded the Director RCME's Coin of Excellence. Due to his natural leadership ability and positive attitude, he was able to promote The Corps of RCME in the local community through his outstanding actions and initiatives.





## Awards and Recognition

### RCEME COIN #67 – Cfn SINCLAIR

#### Presented to Evan Sinclair (brother)

Cfn Sinclair is awarded Director RCEME's Coin of Excellence for his outstanding dedication to The Corps of RCEME. During his short time in uniform, he was able to gain respect from all of his supervisors and peers. He was a true leader and an excellent technician in training with the RCEME OJT Company. He constantly showed dedication and skill well above that expected of his qualification level. It is for his leadership, hard work, passion and dedication that Cfn Sinclair received this honour.



### Commander CADTC Commendation



From left to right:  
**LCol L.R. Dencsak,**  
**MGen J.M.**  
**Lanthier, Pte M.S.**  
**Smith, CWO C.**  
**Chouinard, CWO**  
**L.J.A. Moreau**

On Thursday 4 December 2014, Major-General J.M. Lanthier, Commander Canadian Army Doctrine Training Centre visits the Royal Canadian Electrical and Mechanical Engineers School. While at the school, he presented Private M.S. Smith with a Commander CADTC Commendation. This commendation was presented to Private Smith for promptly reporting the attempted suicide of another service member, a quick action that undoubtedly saved the member's life.



#### ORDER OF MILITARY MERIT 65<sup>TH</sup> LIST

Maj G.C. Garrard      MWO C.P. Kane  
 Capt G. Levesque      Sgt N.L. Barrett  
 CWO J.G.R. Gilbert      Sgt S. Dacey



### Winner of the Logo Contest for the RCEME 75<sup>th</sup> Anniversary

Master Corporal Mike Laevens, a staff member at Electronics-Optronics Platoon, Artisan Company, was announced as having the winning submission for the design contest of the RCEME 75<sup>th</sup> Anniversary Logo. Submissions were received from all over Canada. Thank you to all participants and congratulations to MCpl Laevens!

## Last Call

Pte Jeremiah Cross      21 Mar 2015  
 MWO (ret'd) Jim Buskell      10 Mar 2015  
 MCpl Steven Rasmussen      7 Mar 2015  
 Sgt (ret'd) Christine Langeder      5 Mar 2015  
 Maj (ret'd) William (Bill) Moore      3 Feb 2015  
 MWO (ret'd) James Ferguson      21 Jan 2015  
 LCol (ret'd) Eric Illott      13 Jan 2015  
 Edward Daye      4 Jan 2015  
 MWO (ret'd) George Luscombe      14 Dec 2014  
 MCpl (ret'd) Gary Corrigan      14 Dec 2014

Ronald Goodall      10 Dec 2014  
 WO (ret'd) Jean-Guy Caouette      5 Dec 2014  
 Cfn Kyle Sinclair      21 Nov 2014  
 Capt (ret'd) Stanley "Doug" Morden      17 Nov 2014  
 Robert MacDonald      10 Nov 2014  
 Ssgt (ret'd) Ralph Cathline      5 Nov 2014  
 James Reid      19 Oct 2014  
 Capt (ret'd) Thomas Whitehead      16 Oct 2014  
 Ralph Colburn      3 Oct 2014  
 Cyril "Cy" Carney      28 Sep 2014

Cpl Eric Barbeau      26 Sep 2014  
 Graham Nash      9 Sep 2014  
 Edward Hare      2 Sep 2014  
 John "Jack" Stevenson      2 Sep 2014  
 Ernie Wallace      27 Aug 2014  
 Michael Lewis      27 Jul 2014  
 Alden (Bill) Coughlan      4 Jul 2014  
 WO (ret'd) John Sturgess      22 Jun 2014  
 MWO (ret'd) Raymond Hancox      30 Jun 2014  
 Cpl (ret'd) Wesley Stapleford      18 Feb 2012